

98-A24



United States Department of the Interior

OFFICE OF THE SECRETARY
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600 Harrison Street, Suite 515
San Francisco, California 94107-1376

September 30, 1998

Dick Daniel
CALFED Bay-Delta Program
1416 Ninth Street, Suite 1155
Sacramento, CA 95814

Dear Dick:

Thank you for the opportunity to comment on *Draft Indicators of Ecosystem Health*, distributed at the Bay Delta Advisory Council (BDAC) Ecosystem Restoration Work Group meeting September 8, 1998. This document provides a good overview of indicators, including steps to develop indicators, proposed ecosystem-level and landscape indicators of ecological integrity, and ecosystem-level attributes of the San Francisco Bay-Delta watershed.

We understand at this time that all participatory members have not reviewed the document, Appendix A has not been completely updated, and that some areas need further work by the Indicators group.

Please consider the following suggestions when preparing the next version of the document. We look forward to discussing these comments with you and/or seeing modifications in the next version. If you have any questions, please contact Judi Tamasi of my staff at (415) 427-1477.

General Comments

Please explain the connection between these indicators and the individual restoration projects which are being submitted as proposals to the Ecosystem Roundtable.

Please clarify if these indicators apply to the Associated/Interactive Habitats for each of the four ecosystems. Do indicators apply to the habitats that are included as habitat visions in the Volume 1 of the Ecosystem Restoration Program Plan (ERPP) (e.g., perennial grassland, dune scrub), as well as habitats not included as visions (e.g., oak woodland)?

Appendix A (Essential Ecosystem-Level Attributes of the San Francisco Bay-Delta Watershed) was introduced in the document (on p. 3). It would be helpful to reiterate early in this Indicators document the role of Appendix A, in order to clarify that it provides additional information to the main document. However, if the presentation and format of this document changes when incorporated into the Strategic Plan, this may be a

moot point. You may want to explain (e.g., in the section, "Proposed Ecosystem-Level Indicators of Ecological Integrity Introduction" on p. 10), that the main document primarily defines indicators and the appendix primarily defines attributes, as well as stressors and expanded descriptions of the four ecosystems. You may also want to mention after the last sentence of the section "Delineate human stressors on the ecosystem" (p. 4), that stressors are included in Appendix A.

Specific Comments

On Figure 3 (p. 9), Process for Developing Indicators, it states that the Indicators group is not charged with (1) establishing or determining quantified targets for ecological attributes and indicators and (2) scientific monitoring and focused research for indicators. Who is responsible for these steps? Please clarify for this second step if the Comprehensive Monitoring, Assessment, and Research Program (CMARP) will be the independent scientific review (p. 6). If not, who will be?


Abundance of large woody debris is listed as a natural habitat attribute for upland-river floodplain systems and lowland river-floodplain systems in Appendix A. Please address why large woody debris is listed in the main document as an indicator for upland-river floodplain systems (p. 13), but not for lowland river-floodplain systems (p. 18-19).

Please explain why nutrient loading is considered a Community Energetics/Nutrient Cycling indicator for the Delta Ecosystem (p. 28), but not for the Greater San Francisco Bay Ecosystem (page 33).

On page 24, under Geomorphic Attributes/Indicators for Delta Ecosystem, please address the attribute and indicator for number 4 (relating to connectivity of river channels to wetlands...). It appears that either the attribute or the indicator has been excluded. Please explain the difference between this attribute and indicator on the second page of the accompanying summary table, Table 1 (Summary of Proposed Ecosystem Level Indicators of Ecological Integrity for the CALFED Ecosystem Restoration Program).

Finally, has there been coordination with other groups researching ecological indicators such as the Committee to Evaluate Indicators for Monitoring Aquatic and Terrestrial Environments (managed by the Water Science and Technology Board and the Board on Environmental Studies and Toxicology-in Washington D.C.)? We would be happy to assist with coordination if you think that this would be helpful.

Sincerely,


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Patricia Sanderson Port
Regional Environmental Officer